

## **REMARKS/ARGUMENTS**

### **Summary**

Claims 1-26 are pending in the application. Claims 1 and 15 have been amended. Claims 14 and 16 have been cancelled. Claims 1-13, 15 and 17-26 are pending in the application. The amendments to the claims are supported in the specification. No new matter has been added.

### **Rejections**

#### **35 U.S.C. § 103**

##### ***A. Claims 1, 3-10 and 13-20***

In the Office action, the Examiner rejected claims 1, 3-10 and 13-20 under 35 U.S.C. §103(a) as being unpatentable over Johansen (WO 01/69209). Applicants have amended claims 1 and 15 and cancelled claims 14 and 16. Applicants respectfully traverse this rejection.

Amended claim 1 recites, “wherein said reflective sensor is positioned at the optical vertex of the angular range of said light source assembly, such that said beam of light stays fixed at one location on said reflective sensor as the orientation of said light source assembly is altered over said angular range; and (g) wherein said detector assembly comprises a detector comprising a detector sensing element, and a lens assembly for focusing a reflected image of said sensor onto said detector sensing element, which lens assembly is positioned between said detector and said target area and comprises a sensor imaging double telecentric lens assembly capable of

minimizing image walk on said detector sensing element as the orientation of said light source assembly is altered over said angular range.”

The structure of claim 1 provides a sensor that is positioned at the optical vertex of the rotating light source, and the detector assembly comprises a double telecentric lens thereby, both “beam walk” on the sensor surface as well as “image walk” on the detector when scanning the light source angle is minimized. This helps to insure that any spatial non-uniformities in the collimated beam intensity remain substantially fixed in relation to regions of interest (ROIs) immobilized on the sensor surfaces as the angle of incidence is scanned and do not distort the measured resonance profiles, which could lead to spurious apparent angle shifts of the resonance. (Specification, page 19, lines 29-32 and page 10 lines 1-19).

Johansen provides “A two-dimensional imaging surface plasmon resonance (SPR) apparatus for optical surface analysis of a sample area on a sensor surface is disclosed. The apparatus comprises a sensor surface layer of a conductive material that can support a surface plasmon, such as a free electron metal, e.g. gold, silver or aluminum, a source of electromagnetic beams of two or more wavelengths that illuminate a two-dimensional surface area from either the front or the backside of the sensor surface layer, and a detector for simultaneous, or pseudo simultaneous, detection of two or more wavelengths of reflected intensities from the two dimensional surface area, providing two or more two-dimensional images of the surface area, the two-dimensional images being a function of the effective refractive index at each point on the surface area.” (Abstract). Johansen utilize a sensor unit 200

and an area detector 510 in the imaging SPR apparatus. (Page 6, lines 27-32 and page 8, lines 21-25). However, Johansen does not suggest, anticipate or disclose that the sensor is positioned at the optical vertex of a rotating light source and the detector assembly includes a telecentric lens, which allows the light source angle to be minimized. This helps to insure that any spatial non-uniformities in the collimated beam intensity remain substantially fixed in relation to regions of interest (ROIs) immobilized on the sensor surfaces as the angle of incidence is scanned and do not distort the measured resonance profiles, which could lead to spurious apparent angle shifts of the resonance.

Accordingly, Applicants respectfully submit that amended claim 11 is allowable. Claims 3-10 and 13, 15 and 17-20, which depends from independent claim 1 are allowable because independent claim 1 is allowable. Applicants respectfully request that the Examiner allows claims 1, 3-10 and 13, 15 and 17-20.

***B. Claim 2***

In the Office action, the Examiner rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Johansen in view of Pederson et al. (2002/0044285). In light of the arguments above, Applicants submit that claim 1 is patentable over the references cited by the Examiner. Applicants respectfully traverse this rejection.

Since claim 2 is dependent on patentable amended claim 1, claim 2 should also be patentable based on amended claim 1 for the reasons stated above because the arguments above overcome the Examiner's rejections and Pederson does not include

any element not overcome by the amended claim 1. Applicants request the Examiner to withdraw the rejections of claim 2 as amended.

***C. Claims 11-12***

In the Office action, the Examiner rejected claims 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over Johansen in view of Schwedt et al. (U.S. Patent No. 3,214,596). In light of the arguments above, Applicants submit that claim 1 is patentable over the references cited by the Examiner. Applicants respectfully traverse this rejection.

Since claims 11 and 12 are dependent on patentable amended claim 1, claims 11 and 12 should also be patentable based on amended claim 1 for the reasons stated above because the arguments above overcome the Examiner's rejections and Schwerdt et al. does not add an element that is not overcome by the amended claim 1. Applicants request the Examiner to withdraw the rejections of claims 11 and 12 as amended.

***D. Claims 21-26***

In the Office action, the Examiner rejected claims 21-26 under 35 U.S.C. §103(a) as being unpatentable over Johansen in view of Elkind et al. (U.S. Patent No. 6,326,612). In light of the arguments above, Applicants submit that claim 1 is patentable over the references cited by the Examiner. Applicants respectfully traverse this rejection.

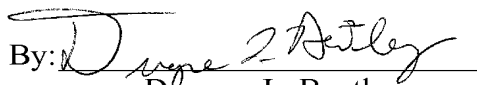
Since claims 21-26 are dependent on patentable amended claim 1, claims 21-26 should also be patentable based on amended claim 1 for the reasons stated above because the arguments above overcome the Examiner's rejections and Elkind et al. does not add an element not overcome by amended claim 1. Applicants request the Examiner to withdraw the rejections of claims 21-26 as amended.

### **Conclusion**

Pending claims 1-13, 15 and 17-26 as amended are patentable. Therefore, in view of the above amendments, Applicants respectfully submit that this application is in condition for allowance and such action is earnestly requested. If for any reason, however, the Examiner feels that a telephone interview would be helpful in resolving any remaining issues the Examiner is respectfully requested to contact Applicants' undersigned attorney. Early and favorable consideration is respectfully requested.

Respectfully submitted,


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